

## TECAMID® 66 black - Stock Shapes

### Chemical Designation

PA 66 (Polyamide 66)

### Colour

black

### Density

1.14 g/cm<sup>3</sup>

### Main features

- very good slide and wear properties
- good machinability
- broad chemical compatibility
- resistant to cleaning agents

### Target Industries

- agricultural machinery
- automotive industry
- business machines
- construction industry
- food engineering
- conveyor technology
- heavy duty industry
- textile industry

Mechanical properties	condition	value		test method	comment
Modulus of elasticity (tensile test)		350,000	psi	ASTM D 638	(1) Data obtained from public source
Tensile strength at yield	@ 73 °F	12,000	psi	ASTM D 638	(2) Data obtained from public source
Tensile strength at break	@ 73 °F	12,300	psi	ASTM D 638	(1) (3) Data obtained from public source
Elongation at yield	@ 73 °F	7	%	ASTM D 638	(2)
Elongation at break	@ 73 °F	50	%	ASTM D 638	
Flexural strength	@ 73 °F	16,500	psi	ASTM D 790	
Modulus of elasticity (flexural test)	@ 73 °F	440,000	psi	ASTM D 790	
Compression strength	@ 73 °F, 1% strain	1,500	psi	ASTM D 695	
Compression modulus	@ 73 °F	392,000	psi	ASTM D 695	(3)
Impact strength (Izod)	@ 73 °F	1.2	ft-lbs/in	ASTM D 256	
Rockwell hardness	@ 73 °F M Scale	85		ASTM D 785	
Coefficient of friction	Dynamic 40 psi, 50 fpm	0.26		ASTM D 3702	
Wear rate	40 psi, 50 fpm	200*10 <sup>-7</sup>	in <sup>3</sup> -min/ft-lbs-hr	ASTM D 3702	

Thermal properties	condition	value		test method	comment
Melting temperature		491	°F	ASTM D 2133	(1) (1) publicly sourced data
Deflection temperature	@264 psi	194	°F	ASTM D 648	(2) (2) publicly sourced data
Deflection temperature	@ 66 psi	450	°F	ASTM D 648	(3) (3) publicly sourced data
Service temperature	short term	300	°F	-	(4) (4) publicly sourced data
Service temperature	Long Term Short Term	185	°F	-	(5) (5) publicly sourced data
Thermal expansion (CLTE)		4.5*10 <sup>-5</sup>	in/in/°F	ASTM D 696	(6) (6) publicly sourced data
Specific heat		0.4	BTU/lb-F°	-	

Electrical properties	condition	value		test method	comment
Volume resistivity		10 <sup>15</sup>	Ω*cm	ASTM D 257	(1) (1) publicly sourced data
Dissipation factor	@ 60 Hz, 70 °F	0.01		ASTM D 150	(2) (2) publicly sourced data
Dielectric constant	@ 60 Hz, 70 °F, 50% RH	4		ASTM D 150	(3) (3) publicly sourced data
Dielectric constant	@ 1 MHz	3.6		ASTM D 150	(4) (4) publicly sourced data

Other properties	condition	value		test method	comment
Water absorption	@ 24 hrs, 73 °F	0.45	%	ASTM D 570	(1) (1) publicly sourced data
Moisture absorption	@ saturation, 73 °F	8.5	%	ASTM D 570	(1) (2) 6.0 mm sample extruded
Flammability (UL94)		V2		-	(2)

→ Resin specification:  
ASTM D6779-11 PA 0114 or ASTM D6779-11 PA0110B54220  
Shapes specification:  
ASTM D5989-11 S-PA0111

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